# Chapter 8: Regulatory Flexibility Analysis/SBREFA

## INTRODUCTION

The Regulatory Flexibility Act (RFA), as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA), requires EPA to consider the economic impacts a rule will have on small entities. RFA/SBREFA requires an agency to prepare a regulatory flexibility analysis for any notice-and-comment rule it issues, unless the Agency certifies that the rule "will not, if promulgated, have a significant economic impact on a substantial number of small entities" (Small Business Regulation Enforcement Fairness Act of 1996, P.L. 104-121, Section 243).

EPA conducted a screening analysis to determine the potential impact of the proposed §316(b) New Facility Rule on small entities. The screening analysis showed that this regulation will not have a significant economic impact on a substantial number of small entities (SISNOSE). This finding is based on the limited number of small entities expected to incur compliance costs and the insignificant magnitude of compliance costs as a percentage of sales revenues.

The analysis used the definitions of small businesses established by the Small Business Administration (SBA) in the screening analysis.[1] The SBA defines small businesses based on Standard Industrial Classification (SIC) codes and size standards expressed by the number of employees, annual receipts, or electric output (13 CFR §121.20). The small business determination is made at the level of the parent firm.

To evaluate the economic impact on small entities, EPA analyzed each of the new facilities projected to incur costs under this regulation. These are electric generating facilities (SIC 49), chemical facilities (SIC 28), steel facilities (SIC 331), and aluminum facilities (SIC 335).[2]

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A "sales test" is used to determine the potential severity of economic impacts on electric generators and manufacturing facilities owned by small firms. The test calculates annualized compliance cost as a percentage of total sales revenues. This screening analysis conducts the sales test at the facility-level.

## 8.1 ELECTRIC GENERATION SECTOR

EPA's analysis in Chapter 5 identified 40 new electric generators expected to incur costs under the proposed §316(b) New Facility Rule. Seven of the 40 facilities are "actual" planned facilities for which real information, including data on the parent firm, was available. The remaining 33 facilities are projected facilities expected to begin operation between 2004 and 2009 (six facilities) and 2011 and 2020 (27 facilities). No actual information on parent firms was available for these 33 facilities.

EPA used the NEWGen database to identify the parent firms of the seven actual facilities. Two of these facilities are owned by more than one firm. Therefore, the total number of firms that own a share in the seven facilities is nine. The Dun & Bradstreet (D&B) database was used to obtain each parent firm's SIC code, employment, and

[1] The SBA definitions only apply to private businesses, not governments or non-profit organizations. All small entities affected by the proposed §316(b) New Facility Rule are private businesses.

[2] New facilities in other industry sectors are assumed not to be impacted by the rule based on their low overall intake flows. They are therefore not included in this SBREFA analysis. See *Chapter 5: Baseline Projections of New Facilities* for further information on how new facilities expected to incur costs were identified.

revenues. Table 8-1 shows that eight parent firms are private businesses and one is a State government. For the purposes of the RFA/SBREFA analysis, States and tribal governments are not considered small governments but rather as independent sovereigns (U.S. EPA, 1999). Therefore, this facility is excluded from the SBREFA analysis.

Table 8-1 also shows the SIC codes of the parent firms. SBA's definition of small business for firms with SIC code 4911 (Electric Services) is different from the definition for other industrial categories. The small business standard for SIC code 4911 is electric output of less than 4 million megawatt hours, rather than an employment or revenue standard. EPA used the Energy Information Administration (EIA) Form 861 database to determine electric output of firms with SIC code 4911.

**Table 8-1: Parent Firm and Facility Information for New In Scope Electric Generators**

| Parent Firm | | | Facility | |
|---|---|---|---|---|
| **Name** | **Type** | **SIC Code** | **Name** | **Share in Facility** |
| ParentA | private business | 4924 | GenA | 100% |
| ParentB | private business | 8741 | GenB | 100% |
| ParentC | private business | 4911 | GenC | 100% |
| ParentD | private business | 4911 | GenD | 100% |
| ParentE1 | private business | 4911 | GenE††† | 50% |
| ParentE2 | private business | unknown†† | | 50% |
| ParentF1 | private business | 4922 | GenF††† | 50% |
| ParentF2 | private business | unknown†† | | 50% |
| ParentG | state government† | n/a | GenG | 100% |

† For the purposes of the RFA/SBREFA analysis, States and tribal governments are not considered small governments but rather as independent sovereigns (U.S. EPA, 1999). This entity is therefore not considered in the small entity analysis.

†† No DUNS number could be identified for this entity. The SIC code is therefore unknown.

††† GenE and GenF are both owned by two parent firms.

*Source: EPA analysis based on RDI, 2000; D&B, 1999.*

EPA determined the size of each of the nine parent firms by comparing their electric output, revenues, or employment to the SBA small entity size standard for the entity's SIC code. Table 8-2 presents the comparison of the SBA small entity size standard with economic data for each parent firm. Based on data from the Dun & Bradstreet database and Form EIA-861, EPA determined that three parent firms are large, two are small, and the other three are of undetermined size. Since no further information could be retrieved for the firms of undetermined size, EPA assumed that these firms are also small entities. This assumption is both reasonable and conservative because, data are generally more readily available for larger entities, and the lack of data may be the result of a smaller entity size. By assuming that the parent firms of unknown size are small, EPA may overestimate the potential impacts on small entities.

**Table 8 2: Parent Firm Information for New In Scope Electric Generators**

| Parent Firm Name | Parent Firm SIC Code | SBA Small Entity Size Standard | Parent Firm Value | Parent Firm Size |
|---|---|---|---|---|
| ParentA | 4924 | 500 emp | 62 emp | **small** |
| ParentB | 8741 | $5,000,000 | $660,000 | **small** |
| ParentC | 4911 | 4,000,000 MWh | 78,552,062 MWh | large |
| ParentD | 4911 | 4,000,000 MWh | 5,059,220 MWh | large |
| ParentE1 | 4911 | 4,000,000 MWh | unknown | **undetermined** |
| ParentE2 | unknown | unknown | unknown | **undetermined** |
| ParentF1 | 4922 | $5,000,000 | $5,781,999,616 | large |
| ParentF2 | unknown | unknown | unknown | **undetermined** |
| ParentG | n/a | n/a | n/a | n/a |

*Source: EPA Analysis based on NEWGen Database; D&B Database.*

No information was available on the entity size of the 27 electric generators projected to begin operation between 2011 and 2020. EPA made the following assumptions for these facilities:

- ***Four of the six extrapolated facilities projected to begin operation between 2004 and 2009 will be owned by small entities.*** This is based on the assumption that the projected facilities have the same characteristics as the seven NEWGen facilities for which actual data are available. Four of the seven NEWGen facilities, or 57 percent, were determined to be owned by a small entity or an entity of unknown size. Applying this factor to the projected six facilities, EPA determined that an additional four projected facilities may be owned by a small entity.

- ***None of the 16 coal facilities projected to begin operation between 2011 and 2020 will be owned by a small entity.*** The 16 coal plants are assumed to have a generating capacity of 800 MW. Using the average electricity sales factors presented in *Chapter 7: Economic Impact Analysis*, each facility would generate more than 3.6 million MWh per year. This amount almost qualifies the facility as a large entity *at the facility-level*. EPA believes that coal plants of 800 MW would actually generate more than the average across all technologies. In addition, it is unlikely that a small firm would plan to construct a large coal plant. Based on these factors, EPA assumes that the 16 new coal facilities will not be owned by a small entity.

- ***Six of the 11 extrapolated combined-cycle facilities projected to begin operation between 2011 and 2020 will be owned by small entities.*** This estimate is based on the assumption that the projected combined-cycle facilities have the same characteristics as the seven NEWGen facilities for which data are available. Fifty-seven percent of the NEWGen facilities were determined to be owned by a small entity or an entity of unknown size. Applying this factor to the projected 11 facilities, EPA determined that an additional six projected facilities would be owned by a small entity

Table 8-3 lists the 14 new electric generators expected to be owned by a small entity. Sales revenues required for the sales test were not available for all parent firms. The test to determine significant economic impacts was therefore applied at the facility-level instead of the parent firm-level.[3] As facility-level revenues are equal to or smaller than the parent firm revenues, this approach may overstate the economic impacts of this rule.

[3] Facility-level revenues were estimated using expected annual electricity generation and expected future prices of electricity. Compliance costs include all costs incurred during the first 30 years of each facility's life. *Chapter 7: Economic Impact Analysis* provides details on the estimation of expected annual compliance costs and expected annual revenues for this screening analysis.

**Table 8-3: Economic Impact Condition of New In Scope Electric Generators**

| Facility Name | No. of Facilities | Parent Name | Facility Information | | |
|---|---|---|---|---|---|
| | | | Estimated Annual Compliance Cost ($1999) | Estimated Annual Revenues ($1999) | Ann. Compl. Cost/ Ann. Revenues |
| GenA | 1 | ParentA | $72,638 | $106,638,872 | 0.07% |
| GenB | 1 | ParentB | $73,147 | $109,136,681 | 0.07% |
| GenE | 1 | ParentE1<br>ParentE2 | $79,448 | $54,195,202 | 0.15% |
| GenF | 1 | ParentF2 | $77,508 | $77,348,729 | 0.10% |
| Gen1-Gen6 | 4 | N/A | $78,987 | $82,226,151 | 0.10% |
| CC1-CC11 | 6 | N/A | $90,850 | $88,466,529 | 0.10% |

*Source: EPA Analysis, 2000.*

Table 8-3 shows that the ratio of estimated annual compliance costs to estimated annual revenues for the 14 in scope facilities owned by a small firm ranges from 0.07 percent to 0.15 percent. None of these facilities are expected to incur compliance costs in excess of one percent of revenues.

## 8.2 MANUFACTURING SECTOR

The analysis in *Chapter 5: Baseline Projections of New Facilities* determined that 58 new manufacturing facilities are expected to incur compliance costs under the proposed §316(b) New Facility Rule. Since EPA's estimate of new manufacturing facilities is based on industry growth forecasts and not on specific planned facilities, actual parent firm information was not available. EPA therefore developed representative facilities based on the characteristics of existing facilities identified in the §316(b) Industry Screener Questionnaire.[4]

Table 8-4 presents the comparison of parent firm employment with the SBA small entity size standard for the 29 new manufacturing facilities projected to begin operation between 2001 and 2010.[5] The SBA standard is based on the firm's SIC code. The table shows that only three of the 29 new manufacturing facilities are projected to be owned by a small parent firm. Two of the three facilities are in the chemicals sector and one is in the metals sector. None of the three small firms are expected to own more than one new facility with costs under the proposed §316(b) New Facility Rule.

[4] For each SIC code with a projected new facility, EPA sorted screener respondents in that SIC code by their facility employment. EPA selected the facility with the median employment value as the representative facility and used that facility's reported firm employment for this SBREFA analysis. Data from the Dun & Bradstreet database were used where information on the firm was not available in the screener. In cases where more than one new facility is projected in an SIC code, EPA divided the screener respondents in as many ranges as there are new facilities and identified the median-employment facility in each range. *Chapter 7: Economic Impact Analysis* provides more detailed information on how facility and firm characteristics for the 58 new manufacturing facilities were determined.

[5] This section only presents information for the 29 facilities expected to begin operation during the first ten years of the rule. EPA's analysis assumed that facilities beginning operation between 2011 and 2020 would have characteristics identical to facilities beginning operation during the first ten years of the forecasting period. Each facility presented in table 8-4 therefore represents two new facilities.

**Table 8-4: Parent Firm Size of New In Scope Manufacturing Facilities**

| Facility ID | SIC Code | SIC Code Description | SBA Small Entity Size Standard (Employees) | Estimated Parent Firm Employment | Parent Firm Size |
|---|---|---|---|---|---|
| new 2812-1 | 2812 | Alkalies and Chlorine | 1,000 | 12,380 | large |
| new 2813-1 | 2813 | Industrial Gases | 1,000 | 25,388 | large |
| new 2819-1 | 2819 | Industrial Inorganic Chemicals, N.E.C. | 1,000 | 81,600 | large |
| new 2819-2 | | | | 5,500 | large |
| new 2821-1 | 2821 | Plastics Materials, Synthetic Resins, and Nonvulcanizable Elastomers | 750 | 10,500 | large |
| new 2821-2 | | | | 70,400 | large |
| new 2821-3 | | | | 290,000 | large |
| new 2824-1 | 2824 | Manmade Organic Fibers, Except Cellulosic | 1,000 | 98,000 | large |
| new 2833-1 | 2833 | Medicinal Chemicals and Botanical Products | 750 | 53,800 | large |
| new 2834-1 | 2834 | Pharmaceutical Preparations | 750 | 40,000 | large |
| new 2841-1 | 2841 | Soaps and Other Detergents, Except Speciality Cleaners | 750 | 26,946 | large |
| new 2865-1 | 2865 | Cyclic Organic Crudes and Intermediates, and Organic Dyes and Pigments | 750 | 39,362 | large |
| new 2869-1 | 2869 | Industrial Organic Chemicals, N.E.C. | 1,000 | 17,000 | large |
| new 2869-2 | | | | 17,000 | large |
| new 2869-3 | | | | 98,000 | large |
| new 2869-4 | | | | 260 | **small** |
| new 2869-5 | | | | 39,362 | large |
| new 2869-6 | | | | 98,000 | large |
| new 2869-7 | | | | 13,300 | large |
| new 2869-8 | | | | 13,300 | large |
| new 2869-9 | | | | 15,000 | large |
| new 2873-1 | 2873 | Nitrogenous Fertilizers | 1,000 | 8,390 | large |
| new 2874-1 | 2874 | Phosphatic Fertilizers | 500 | 9,000 | large |
| new 2899-1 | 2899 | Chemicals and Chemical Preparations, NEC | 500 | 135 | **small** |
| new 3312-1 | 3312 | Steel Works, Blast Furnaces (Including Coke Ovens), and Rolling Mills | 1,000 | 14,800 | large |
| new 3312-2 | | | | 41,620 | large |
| new 3312-3 | | | | 16,400 | large |
| new 3316-1 | 3316 | Cold-Rolled Steel Sheet, Strip, and Bars | 1,000 | 4,580 | large |
| new 3353-1 | 3353 | Aluminum Sheet, Plate, and Foil | 750 | 690 | **small** |

*Source: EPA analysis based on §316(b) Industry Screener Questionnaire, 1999; D&B, 1999.*

Each of the three facilities owned by a small parent firm was further analyzed to determine if it will experience a significant economic impact as a result of this regulation. The analysis is based on the ratio of estimated annual compliance cost to estimated annual revenues. As with electric generators, this analysis was conducted at the facility-level rather than the firm-level, and includes all compliance costs incurred during the first 30 years of each facility's life.. (See *Chapter 7: Economic Impact Analysis* for details on the estimation of expected annual compliance costs and expected annual revenues for this screening analysis.)

**Table 8-5: Economic Impact Condition of New In Scope Manufacturing Facilities**

| Facility ID | Facility SIC | Facility Information | | |
|---|---|---|---|---|
| | | Estimated Annual Compliance Cost ($1999) | Estimated Annual Revenues ($1999) | Annual Compliance Cost/ Annual Revenues |
| new 2869-4 | 2869 | $74,626 | $67,565,540 | 0.11% |
| new 2899-1 | 2899 | $94,879 | $30,360,360 | 0.31% |
| new 3353-1 | 3353 | $73,359 | $404,433,726 | 0.02% |

*Source: EPA Analysis, 2000.*

The results in Table 8-5 show that none of the facilities owned by a small firm would have a compliance cost-to-revenue ratio of greater than one percent. Based on this screening analysis EPA determined that no small firm in the analyzed manufacturing industries would experience significant impacts from the compliance cost of this rule.[6]

[6] The estimated ratio of annual compliance costs to annual revenues is likely to overestimate impacts because it is based on facility revenues rather than firm revenues. Firm revenues are always greater than or equal to facility revenues. In addition, the number of facilities owned by small entities may be overstated because it is based on the firm's *current employment*. Once the employment of the new facility is added to the firm's employment, the firm may no longer be considered small.

## 8.3 Summary of Results

The RFA/SBREFA analysis for this proposed regulation shows that only 20 facilities owned by a small entity would be impacted by the proposed §316(b) New Facility Rule. This number is well below the SBREFA threshold of 100 small entities suggested by EPA's SBREFA guidance. In addition, none of the small entities are expected to experience a significant economic impact as a result of this regulation. Therefore, EPA certifies that the proposed §316(b) New Facility Rule will not have a significant economic impact on a substantial number of small entities.

Table 8-6 summarizes the results of the SBREFA screening analysis.

**Table 8-6: Projected Number of New Facilities Owned by a Small Entity**

| SIC Code | Facilities Owned by Small Entities | Compliance Cost as a Percent of Revenue | Number of Facilities Owned by a Small Entity With Significant Impact |
|---|---|---|---|
| **Electric Generators** | | | |
| ***49, 87*** | ***14*** | ***0.07% to 0.15%*** | ***0*** |
| **Manufacturing Facilities** | | | |
| 26 – Pulp & Paper | 0 | n/a | 0 |
| 28 – Chemicals | 4 | 0.11% to 0.31% | 0 |
| 29 – Petroleum | 0 | n/a | 0 |
| 33 – Metals | 2 | 0.02% | 0 |
| ***Total Manufacturing*** | ***6*** | ***0.02% to 0.31%*** | ***0*** |
| **Total** | **20** | **0.02% to 0.29%** | **0** |

*Source: EPA Analysis, 2000.*

## REFERENCES

Dun and Bradstreet (D&B). 1999. Data as of April 1999.

Research Data International (RDI). 2000. NEWGen Database.

U.S. Environmental Protection Agency (EPA). 1999. *Revised Interim Guidance for EPA Rulewriters: Regulatory Flexibility Act as amended by the Small Business Regulatory Enforcement Fairness Act. March 29, 1999.*